



Investigating Organic Matter in Soil

When soil is mixed with water and alum, the **organic** part of the soil floats and the **inorganic** part sinks. This makes it easy for people to see the differences in the amount of organic matter present in different soil samples. Remember, *inorganic matter* means the part of the soil that used to be rocks. *Organic matter* means the part of soil that comes from something that used to be living. Organic matter is an important source of nutrients for plants. In this investigation, you will compare the amount of organic matter in different soil samples.

1. Collect samples of three different kinds of soil. Label your soil samples A, B, and C. Write where you collected them in the chart below:

Soil Sample	Location (where the soil sample came from)	Organic Matter Measurement (the part that floats)	Inorganic Matter (the part that sinks)
Example	Playground, near swings.	1 cm	3 cm
A			
B			
C			

2. **Prediction:** Which of your soil samples do you think contains the most organic matter? Which soil sample do you think has the least?

Most: _____ Least: _____

3. **Procedure:**

- a. Measure 1 teaspoon of soil type A and put it into the container marked A. Repeat the same step with soil types B and C.
- b. Add enough water to each of the containers so that each is filled to a marked line 1 cm below the top.
- c. Carefully add one pinch of alum to each of the containers. Put the lids on the containers and shake each one gently to mix. Then set the containers upright on a flat surface and wait 3-5 minutes.



What We Found Out

4. **Observations:** Draw a picture of what your experiment looks like in the space below. Include each of the three containers:

A.	B.	C.
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5. Use a ruler to measure the depth of the organic layer and the depth of the inorganic layer. Record your results in the chart located in step 1.
6. Describe what happened in your experiment in the space below.

7. **Conclusion:** What did you learn from this experiment?

8. Which soil would you choose for a garden? Explain why.
